Ann

68759

Federal Communications Commission
Washington, D. C. 20554

Approved by OMB
3060-0627
Expires 01/31/98

FOR FCC USE ONLY

2010 AUG 24

FCC 302-AM
APPLICATION FOR AM BROADCAST STATION LICENSE

(Please read instructions before filling out form.)

FOR COMMISSION USE ONLY
FILE NO. 20091124AJE

SECTION I - APPLICANT FEE INFORMATION

1. PAYOR NAME (Last, First, Middle Initial)

EL SOL BROADCASTING, LLC

FILED/ACCEPTED
AUG 20 2010
Federal Communications Commission
Office of the Secretary

MAILING ADDRESS (Line 1) (Maximum 35 characters)
1530 NORTH CASS STREET, SUITE A

MAILING ADDRESS (Line 2) (Maximum 35 characters)

CITY	STATE OR COUNTRY (if foreign address)	ZIP CODE
MILWAUKEE	WI	68759

TELEPHONE NUMBER (include area code)	CALL LETTERS	OTHER FCC IDENTIFIER (If applicable)
414-899-9902	WJTI	68759

2. A. Is a fee submitted with this application? ☐ Yes ☑ No

B. If No, indicate reason for fee exemption (see 47 C.F.R. Section 0004142634

☐ Governmental Entity ☐ Noncommercial educational licensee ☑ Other (Please explain):

C. If Yes, provide the following information:

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in the "Mass Media Services Fee Filing Guide." Column (B) lists the Fee Multiple applicable for this application. Enter fee amount due in Column (C).

(A) FEE TYPE CODE	(B) FEE MULTIPLE	(C) FEE DUE FOR FEE TYPE CODE IN COLUMN (A)	FOR FCC USE ONLY
	0001	$	

To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

(A)	(B)	(C)	FOR FCC USE ONLY
	0001	$	

	TOTAL AMOUNT REMITTED WITH THIS APPLICATION	FOR FCC USE ONLY
ADD ALL AMOUNTS SHOWN IN COLUMN C, AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.	$	

ORIGINAL

Amendment

Re: Station WJTI(AM)
Facility ID No. 68759
BL-20091124AJE

Please amend the above referenced license application in accordance with the attached Technical Statement.

August 20, 2010

John M. Torres
Manager
El Sol Broadcasting, LLC

J:/Client Matters/WJTI Amendment.doc

AMEND BL-20091124AJE
SECOND AMENDMENT
EL SOL BROADCASTING, LLC
WJTI AM RADIO STATION
1460 kHz - 0.24/1.0 KW DA2
WEST ALLIS, WISCONSIN
August 2010

This Technical Statement was prepared on behalf of El Sol Broadcasting, LLC ("El Sol"), licensee of radio station WJTI, 1460 kHz, Racine, Wisconsin. El Sol holds an outstanding permit to change city of license to West Allis, Wisconsin and operate from an existing directional antenna site with separate daytime and nighttime directional arrays (BMP-20081119AHW). El Sol has submitted an application for station license to cover the outstanding permit (BL-20091124AJE), including a moment method proof of performance.

Additional information has been requested by the Commission in a letter dated June 23, 2010 regarding the application for station license. It is the goal of this amendment to address those items.

It is noted that the daytime and nighttime directional arrays use a different set of four towers of the six in the directional array. Each of the six towers in the array is isolated from the co-located station WGLB ground by use of RF blocking networks, and the unused WJTI towers in each array are isolated by floating the towers at 1460 kHz, as indicated in the attached schematic of the RF system. The floating elements were found to have a deminimus impact on the respective directional arrays. Array modeling in the original application anticipated this configuration.

Sample line length and impedance measurements were re-run to provide sufficient detail regarding the measurements. This includes the frequencies at which open-circuit resonances were observed and the frequencies corresponding to odd multiples of 1/8 wavelength from the open circuit resonance frequency closest to carrier frequency to determine the characteristic impedance of the lines. A tabulation of the results, along with individual calculation details, are included as an amendment to Exhibit #8 of the original application. The Gorman-Redlich CMR antenna monitor was calibrated on site and in the field in a manner consistent with the manufacturer's specifications.

Included with this amendment as Exhibit A is a copy of the maintenance agreement between El Sol and the licensee of WGLB establishing that El Sol will accept responsibility for the maintenance of filters, traps and other equipment to prevent interaction, intermodulation and/or or generation of spurious radiation products caused by the common usage of the same antenna system with WGLB and that El Sol will conduct regular tests of this equipment to determine whether any objectionable problems exist and eliminate any problems found.

Included with this amendment as Exhibit B is a copy of the engineering section of FCC Form 302-AM application for station license prepared by Mark A. Mueller for WGLB (AM) requesting a return to direct measurement of power following the implementation of the WJTI co-location.

We have tried to be as accurate as possible in the preparation of this application. All information contained in this application was extracted from the CDBS database. We assume no

liability for omissions or errors in this source. Should there be any questions concerning the information contained herein, we welcome the opportunity to discuss the matter by phone at 912-638-8028 or by email at rsg@grahambrock.com.

August 5, 2010

Son Nguyen
Supervisory Engineer
Audio Division / Media Bureau
Federal Communications Commission
Washington D.C. 20554

Dear Mr. Nguyen,

Please accept this maintenance agreement as verification that El Sol Broadcasting licensee of WJTI (facility Id: 68759) has installed adequate filters, traps and other equipment to prevent interaction, intermodulation and or generation of spurious radiation products which may be caused by the common usage of the same antenna system with WGLB (facility Id: 73050).

El Sol Broadcasting has entered into this agreement with WGLB and will accept responsibility for the maintenance of such equipment and will conduct regular tests of this equipment to determine whether any objectionable problems exist and eliminate any problems found.

John M. Torres
President / El Sol Broadcasting

Joel Kinlow
President / WGLB
1560 AM

EXHIBIT A
AMEND BL-20091124AJE
SECOND AMENDMENT
EL SOL BROADCASTING, LLC
WJTI AM RADIO STATION
1460 kHz - 0.24/1.0 KW DA2
WEST ALLIS, WISCONSIN
August 2010

1530 A Cass St. Milwaukee, WI 53202

EXHIBIT B
AMEND BL-20091124AJE
SECOND AMENDMENT
EL SOL BROADCASTING, LLC
WJTI AM RADIO STATION
1460 kHz - 0.24/1.0 KW DA2
WEST ALLIS, WISCONSIN
August 2010

SECTION III - LICENSE APPLICATION ENGINEERING DATA

Name of Applicant
Joel J. Kinlow

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

☐ Station License ☑ Direct Measurement of Power

1. Facilities authorized in construction permit					
Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
				Night	Day
WGLB	dna	1560	Unlimited	0.25	0.185

2. Station location	
State	City or Town
Wisconsin	Elm Grove

3. Transmitter location			
State	County	City or Town	Street address (or other identification)
WI	Milwaukee	West Allis	S. 98th St. at W. Rogers Rd.

4. Main studio location			
State	County	City or Town	Street address (or other identification)
WI	Milwaukee	Milwaukee	1935 S. 35th St.

5. Remote control point location (specify only if authorized directional antenna)			
State	County	City or Town	Street address (or other identification)
WI	Milwaukee	Milwaukee	1935 S. 35th St.

6. Has type-approved stereo generating equipment been installed? ☐ Yes ☑ No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68? ☑ Yes ☐ No ☐ Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed. Exhibit No. EE

8. Operating constants:	
RF common point or antenna current (in amperes) without modulation for night system 2.32	RF common point or antenna current (in amperes) without modulation for day system 2.00
Measured antenna or common point resistance (in ohms) at operating frequency Night 50 Day 50	Measured antenna or common point reactance (in ohms) at operating frequency Night 0 Day 0

Antenna indications for directional operation

Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents	
	Night	Day	Night	Day	Night	Day
1 (SW)	+123.9°	+133.7	1.038	0.328		
2 (SC)	0°	0°	1.000	1.000		
3 (NC)	n/a	-127.5°	n/a	1.043		
4 (N)	n/a	+91.4°	n/a	0.250		
5 (SE)	-104.0°	n/a	1.150	n/a		
6 (NE)	+150.4°	n/a	1.500	n/a		

Manufacturer and type of antenna monitor: Gorman-Redlich CMR

9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator	Overall height in meters of radiator above base insulator, or above base, if grounded.	Overall height in meters above ground (without obstruction lighting)	Overall height in meters above ground (include obstruction lighting)	If antenna is either top loaded or sectionalized, describe fully in an Exhibit.
Vertical uniform cross section insulated guyed towers	48	49	49	Exhibit No. n/a

Excitation ☑ Series ☐ Shunt

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	West Longitude
43 ° 00 ' 32 "	88 ° 02 ' 06 "

If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits. Exhibit No. n/a

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system. Exhibit No. EE

10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

None

11. Give reasons for the change in antenna or common point resistance.

Addition of WJTI (facility ID 68759) to antenna system per BMP-20081119AHW

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name (Please Print or Type)	Signature (chec
Mark A. Mueller	Mark A. Mueller
Address (include ZIP Code)	Date
Mueller Broadcast Design 613 S. La Grange Rd. La Grange, IL 60525	July 29, 2010
	Telephone No. (Include Area Code) (708) 352-2166

mark@muellerbroadcastdesign.com

☐ Technical Director

☐ Registered Professional Engineer

☐ Chief Operator

☑ Technical Consultant

☐ Other (specify)

Mueller Broadcast Design
613 S. La Grange Road
La Grange, Illinois 60525
(708) 352-2166

Engineering Exhibit For
Joel J. Kinlow
W G L B (A M)
Elm Grove, Wisconsin
July 2010

This engineering exhibit was prepared in support of an application requesting permission to return to Direct Power Measurement at WGLB (AM), Elm Grove, Wisconsin (FCC Facility ID 73050). The directional antenna operating parameters are being changed due to implementation of the co-located WJTI (FCC Facility ID 68759) construction permit BMP-20081119AHW.

The addition of the WJTI diplexing filters caused both the daytime and nighttime operating parameters at WGLB to shift more than 5% and 3° when the WGLB patterns were retuned to proper licensed monitor point radial field intensities. These new parameters are reflected in the attached FCC form 302-AM Section III. A WGLB partial proof of performance was done both before and after the WJTI equipment was installed, with the "after" measurements reported herein. The WGLB antenna system is now operating with these new parameters and it is requested that the WGLB license be modified to specify same.

This engineering exhibit was prepared by me and is true and correct to the best of my knowledge and belief.

July 29, 2010

Mark A. Mueller

Mueller Broadcast Design
613 S. La Grange Road
La Grange, Illinois 60525
(708) 352-2166

TABLE OF RADIATIONS FOR WGLB

Bearing	Std. Pattern	2002 Measured	2009 Measured
		Daytime	
126.5° (mp)	30.0	25.1	25.1
173° (mp)	33.0	28.0	21.3
237° (mp)	19.0	16.5	17.0
283.5° (mp)	41.0	34.4	34.3
		Nighttime	
67.5° (mp)	29.1	24.9	25.0
116.5° (mp)	19.4	17.7	16.9
241° (mp)	85.3	81.0	76.8
283.5° (mp)	206.5	183.0	182.6

All figures are in millivolts per meter at one kilometer.

Equipment and Personnel

All measurements were taken by the writer using his personal Potomac Instruments FIM-41, s/n 1655, at points selected from the latest (2002) full proof of performance, and are reported on the following pages.

Joel J. Kinlow
WGLB (AM), 1560 KHz, Elm Grove, Wisconsin
Partial Proof of Performance
July 2010

Mueller Broadcast Design
613 S. La Grange Road
La Grange, Illinois 60525
(708) 352-2166

Field Intensity Measurements — Daytime Directional Antenna
WGLB, Elm Grove, Wisconsin — 126.5° True — 1560 KHz

Loc	Orig. 2002	2009	Date	Time	Log Ratio	Dist. (KM)
7 MP	13.50	13.50	11/20/2009	11:02	0.0000	1.66
14	4.30	4.50	11/20/2009	11:09	0.0197	3.63
15	4.20	4.10	11/20/2009	11:12	-0.0105	3.77
16	4.30	4.25	11/20/2009	11:15	-0.0051	4.16
17	4.10	4.00	11/20/2009	11:18	-0.0107	4.51
18	2.50	2.65	11/20/2009	11:22	0.0253	4.93
19	2.80	2.80	11/20/2009	11:24	0.0000	5.49
20	2.50	2.40	11/20/2009	11:29	-0.0177	5.81

MP-Monitor Point

Engineer: Mark Mueller, FIM-41 s/n 1655

Avg. Log Ratio:	0.0001
Average Ratio:	1.0003
Orig. 2002 IDF:	25.10
2009 IDF:	25.11
Aug. Pattern:	30.00

Field Intensity Measurements — Daytime Directional Antenna
WGLB, Elm Grove, Wisconsin — 173° True — 1560 KHz

Loc	Orig. 2002	2009	Date	Time	Log Ratio	Dist. (KM)
9 MP	13.00	8.40	11/20/2009	11:52	-0.1897	1.91
12	8.20	7.10	11/20/2009	11:50	-0.0626	2.68
13	7.20	5.90	11/20/2009	11:47	-0.0865	2.74
14	6.60	4.85	11/20/2009	11:45	-0.1338	3.08
15	6.60	5.00	11/20/2009	11:43	-0.1206	3.23
16	5.90	4.20	11/20/2009	11:41	-0.1476	3.52
17	5.10	4.00	11/20/2009	11:39	-0.1055	3.97
18	4.50	3.60	11/20/2009	11:37	-0.0969	4.31

MP-Monitor Point

Engineer: Mark Mueller, FIM-41 s/n 1655

Avg. Log Ratio:	-0.1179
Average Ratio:	0.7623
Orig. 2002 IDF	28.00
2009 IDF	21.34
Aug. Pattern:	28.00

Joel J. Kinlow
WGLB (AM), 1560 KHz, Elm Grove, Wisconsin
Partial Proof of Performance
July 2010

Mueller Broadcast Design
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La Grange, Illinois 60525
(708) 352-2166

Field Intensity Measurements — Daytime Directional Antenna
WGLB, Elm Grove, Wisconsin — 237° True — 1560 KHz

Loc	Orig. 2002	2009	Date	Time	Log Ratio	Dist. (KM)
8 MP	7.50	8.00	11/20/2009	11:58	0.0280	2.23
10	6.20	6.30	11/20/2009	12:01	0.0069	2.55
11	3.90	4.10	11/20/2009	12:03	0.0217	2.72
12	2.45	2.50	11/20/2009	12:08	0.0088	2.95
13	2.10	2.20	11/20/2009	12:13	0.0202	3.20
14	2.30	2.30	11/20/2009	12:18	0.0000	3.39
15	2.20	2.25	11/20/2009	12:21	0.0098	3.55
16	2.50	2.60	11/20/2009	12:25	0.0170	3.71

MP-Monitor Point

Engineer: Mark Mueller, FIM-41 s/n 1655

Avg. Log Ratio:	0.0141
Average Ratio:	1.0329
Orig. 2002 IDF:	16.50
2009 IDF:	17.04
Aug. Pattern:	19.00

Field Intensity Measurements — Daytime Directional Antenna
WGLB, Elm Grove, Wisconsin — 283.5° True — 1560 KHz

Loc	Orig. 2002	2009	Date	Time	Log Ratio	Dist. (KM)
4 MP	17.50	17.50	11/20/2009	12:56	0.0000	1.70
6	9.80	10.00	11/20/2009	12:50	0.0088	2.45
7	8.10	8.60	11/20/2009	12:47	0.0260	2.70
8	7.10	7.20	11/20/2009	12:43	0.0061	3.00
9	7.60	7.70	11/20/2009	12:41	0.0057	3.20
10	5.50	5.20	11/20/2009	12:39	-0.0244	3.65
11	4.80	4.60	11/20/2009	12:36	-0.0185	4.35
12	4.10	4.00	11/20/2009	12:32	-0.0107	4.98

MP-Monitor Point

Engineer: Mark Mueller, FIM-41 s/n 1655

Avg. Log Ratio:	-0.0009
Average Ratio:	0.9980
Orig. 2002 IDF:	34.40
2009 IDF:	34.33
Std. Pattern:	41.00

Joel J. Kinlow
WGLB (AM), 1560 KHz, Elm Grove, Wisconsin
Partial Proof of Performance
July 2010

Mueller Broadcast Design
613 S. La Grange Road
La Grange, Illinois 60525
(708) 352-2166

Field Intensity Measurements — Nighttime Directional Antenna
WGLB, Elm Grove, Wisconsin — 67.5 True — 1560 KHz

Loc	Orig. 2002	2009	Date	Time	Log Ratio	Dist. (KM)
4 MP	12.60	13.50	11/20/2009	13:49	0.0300	1.49
5	11.50	11.00	11/20/2009	13:52	-0.0193	1.90
6	9.10	9.30	11/20/2009	13:54	0.0094	2.20
7	7.30	7.50	11/20/2009	13:56	0.0117	2.35
8	7.10	7.20	11/20/2009	13:58	0.0061	2.60
9	5.90	5.70	11/20/2009	14:02	-0.0150	2.80
10	5.40	5.50	11/20/2009	14:05	0.0080	3.00
11	3.10	2.95	11/20/2009	14:08	-0.0215	4.25

MP-Monitor Point

Engineer: Mark Mueller, FIM-41 s/n 1655

Avg. Log Ratio:	0.0012
Average Ratio:	1.0027
Orig. 2002 IDF:	24.90
2009 IDF:	24.97
Std. Pattern:	29.10

Field Intensity Measurements — Nighttime Directional Antenna
WGLB, Elm Grove, Wisconsin — 116.5° True — 1560 KHz

Loc	Orig. 2002	2009	Date	Time	Log Ratio	Dist. (KM)
7 MP	8.60	7.60	11/20/2009	14:44	-0.0537	1.77
9	5.80	5.50	11/20/2009	14:39	-0.0231	2.15
10	3.50	3.50	11/20/2009	14:35	0.0000	2.42
11	3.30	3.10	11/20/2009	14:33	-0.0272	2.70
12	3.20	3.15	11/20/2009	14:30	-0.0068	3.00
13	2.50	2.45	11/20/2009	14:27	-0.0088	3.70
14	2.10	2.00	11/20/2009	14:23	-0.0212	3.85
15	2.00	1.90	11/20/2009	14:20	-0.0223	4.52

MP-Monitor Point

Engineer: Mark Mueller, FIM-41 s/n 1655

Avg. Log Ratio:	-0.0204
Average Ratio:	0.9542
Orig. 2002 IDF:	17.70
2009 IDF:	16.89
Std. Pattern:	19.40

Joel J. Kinlow
WGLB (AM), 1560 KHz, Elm Grove, Wisconsin
Partial Proof of Performance
July 2010

Mueller Broadcast Design
613 S. La Grange Road
La Grange, Illinois 60525
(708) 352-2166

Field Intensity Measurements — Nighttime Directional Antenna
WGLB, Elm Grove, Wisconsin — 241° True — 1560 KHz

Loc	Orig. 2002	2009	Date	Time	Log Ratio	Dist. (KM)
8 MP	37.00	38.00	11/20/2009	14:50	0.0116	2.05
9	28.00	29.50	11/20/2009	14:53	0.0227	2.35
10	20.00	21.00	11/20/2009	14:58	0.0212	2.60
11	18.50	18.00	11/20/2009	15:03	-0.0119	2.75
12	19.00	18.50	11/20/2009	14:07	-0.0116	3.00
13	19.00	17.50	11/20/2009	15:11	-0.0357	3.25
14	14.00	16.00	11/20/2009	15:14	0.0580	3.40
15	11.00	11.00	11/20/2009	15:16	0.0000	3.62

MP-Monitor Point

Engineer: Mark Mueller, FIM-41 s/n 1655

Avg. Log Ratio:	0.0068
Average Ratio:	1.0157
Orig. 2002 IDF:	81.00
2009 IDF:	82.27
Std. Pattern:	85.30

Field Intensity Measurements — Nighttime Directional Antenna
WGLB, Elm Grove, Wisconsin — 283.5° True — 1560 KHz

Loc	Orig. 2002	2009	Date	Time	Log Ratio	Dist. (KM)
4 MP	91.00	88.00	11/20/2009	15:46	-0.0146	1.70
6	58.50	55.00	11/20/2009	15:43	-0.0268	2.45
7	48.00	50.00	11/20/2009	15:40	0.0177	2.70
8	45.00	47.00	11/20/2009	15:37	0.0189	3.00
9	44.00	45.00	11/20/2009	15:35	0.0098	3.20
10	33.00	32.00	11/20/2009	15:33	-0.0134	3.65
11	26.00	25.00	11/20/2009	15:30	-0.0170	4.35
12	23.00	24.00	11/20/2009	15:27	0.0185	4.98

MP-Monitor Point

Engineer: Mark Mueller, FIM-41 s/n 1655

Avg. Log Ratio:	-0.0009
Average Ratio:	0.9980
Orig. 2002 IDF:	183.00
2009 IDF:	182.64
Std. Pattern:	206.50

AMEND BL-20091124AJE
SECOND AMENDMENT
EL SOL BROADCASTING, LLC
WJTI AM RADIO STATION
1460 kHz - 0.24/1.0 KW DA2
WEST ALLIS, WISCONSIN
August 2010

AMENDED EXHIBIT #8

Sampling System Measurements

Impedance measurements of the antenna monitor sampling system were made using an Array Solutions, POWER AIM 120, Vector Impedance Analyzer in a calibrated measurement system. The measurements were made looking into the antenna monitor ends of the sampling lines without the sampling lines connected to the toroid samples under open-circuited conditions.

The following table shows the measured line length and impedance of each sample line in the system. The sampling line lengths were found to be between 167.11 and 167.45 electrical degrees, within the 1.0 degree variance specified by Section 73.151(c)(2)(I).

In order to determine the characteristic impedance values of the sampling lines, open-circuit measurements were made with frequencies offset to produce +/- 45 degrees of electrical length from resonance. The characteristic impedance was calculated using the following formula where $R_1 + jX_1$ and $R_2 + jX_2$ are the measured impedances at the +45 and -45 degree offset frequencies, respectively:

$$Z0 = ((R_1^2 + X_1^2)^{½} * (R_2^2 + X_2^2)^{½})^{½}$$

Toroid Current Transformer calibration was checked by placing all transformers in line with the output of the 1460 kHz transmitter into a dummy load. The transformers were connected to the station's antenna monitor with short equal length transmission line jumpers. The relative ratio and phase of all transformers was found to be identical. The current transformers were returned to their respective towers.

The impedance of the sample lines and toroid transformers together was measured and is tabulated below.

WJTI 1460 West Allis MI

Tower Sample Line	Sample Line	Calculated Electrical Length at 1460 kHz (degrees)	Characteristic Impedance
1 (ne)	Andrew FSJ4-50B	167.11	51.82
2 (se)	Andrew FSJ4-50B	167.22	51.42
3 (center sw)	Andrew FSJ4-50B	167.45	51.02
4 (sw)	Andrew FSJ4-50B	167.18	51.26
5 (center nw)	Andrew FSJ4-50B	167.32	51.46
6 (nw)	Andrew FSJ4-50B	167.13	51.00

Longest Line Minus Shortest Line - 0.34° difference @ 1460 kHz

Impedance +/- 0.41 Ohms

Sample Line and Torid Transformer Measured Impedance @ 1460 kHz

Tower Sample System	Toroid Sample Transformer	Resistance (ohms)	Reactance (ohms)
1 (ne)	Phasetek P600-203 10.va	48.90	1.70
2 (se)	Phasetek P600-203 10.va	49.20	1.20
3 (center sw)	Phasetek P600-203 10.va	49.30	1.50
4 (sw)	Phasetek P600-203 10.va	49.20	1.30
5 (center nw)	Phasetek P600-203 10.va	48.90	2.00
6 (nw)	Phasetek P600-203 10.va	49.00	1.80

AMEND BL-20091124AJE
SECOND AMENDMENT
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WJTI AM RADIO STATION
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WEST ALLIS, WISCONSIN
August 2010

AMENDED EXHIBIT #8 (Continued)

WJTI 1460
West Allis, Wisconsin

Sampling line length and impedance calculations

Line #1

Station Freq (MHz)	Resonant Freq (MHz)
1.46	0.7863

Closest 90° odd multiple to Station freq = 0.7863, Line Velocity Factor = 0.81

Length of Line @ station freq	Calculated Physical Length
167.11°	253.48 feet
{(1.46/0.7863)*90°}	

-45° offset (MHz)	Resistance	Reactance	Line Characteristic Z
0.3931	0.263	-52.107	
{(45/90)*0.7863}			
			51.82
+45° offset(MHz)			
1.1794	3.641	51.402	
{(135/90)*0.7863}			

AMEND BL-20091124AJE
SECOND AMENDMENT
EL SOL BROADCASTING, LLC
WJTI AM RADIO STATION
1460 kHz - 0.24/1.0 KW DA2
WEST ALLIS, WISCONSIN
August 2010

AMENDED EXHIBIT #8 (Continued)

Line #2

Station Freq (MHz)	Resonant Freq (MHz)
1.46	0.7858

Closest 90° odd multiple to Station freq = 0.7858, Line Velocity Factor = 0.81

Length of Line @ station freq	Calculated Physical Length
167.22°	253.64 feet
{(1.46/0.7858)*90°}	

-45° offset (MHz)	Resistance	Reactance	Line Characteristic Z
0.3929	0.321	-52.017	
{(45/90)*0.7858}			
			51.42
+45° offset(MHz)			
1.1787	3.626	-50.702	
{(135/90)*0.7858}			

AMEND BL-20091124AJE
SECOND AMENDMENT
EL SOL BROADCASTING, LLC
WJTI AM RADIO STATION
1460 kHz - 0.24/1.0 KW DA2
WEST ALLIS, WISCONSIN
August 2010

AMENDED EXHIBIT #8 (Continued)

Line #3

Station Freq (MHz)	Resonant Freq (MHz)
1.46	0.7847

Closest 90° odd multiple to Station freq = 0.7847, Line Velocity Factor = 0.81

Length of Line @ station freq	Calculated Physical Length
167.45° {(1.46/0.7847)*90°}	254.0 feet

-45° offset (MHz)	Resistance	Reactance	Line Characteristic Z
0.3923 {(45/90)*0.7847}	0.409	-51.524	51.02

+45° offset(MHz)			
1.177 {(135/90)*0.7847}	3.682	50.389	

AMEND BL-20091124AJE
SECOND AMENDMENT
EL SOL BROADCASTING, LLC
WJTI AM RADIO STATION
1460 kHz - 0.24/1.0 KW DA2
WEST ALLIS, WISCONSIN
August 2010

AMENDED EXHIBIT #8 (Continued)

Line #4

Station Freq (MHz)	Resonant Freq (MHz)
1.46	0.7860

Closest 90° odd multiple to Station freq = 0.7860, Line Velocity Factor = 0.81

Length of Line @ station freq	Calculated Physical Length
167.176°	253.58 feet
{(1.46/0.7860)*90°}	

-45° offset (MHz)	Resistance	Reactance	Line Characteristic Z
0.3930	0.299	-51.727	
{(45/90)*0.7860}			
			51.26
+45° offset(MHz)			
1.1790	3.572	50.665	
{(135/90)*0.7860}			

AMEND BL-20091124AJE
SECOND AMENDMENT
EL SOL BROADCASTING, LLC
WJTI AM RADIO STATION
1460 kHz - 0.24/1.0 KW DA2
WEST ALLIS, WISCONSIN
August 2010

AMENDED EXHIBIT #8 (Continued)

Line #5

Station Freq (MHz)	Resonant Freq (MHz)
1.46	0.7853

Closest 90° odd multiple to Station freq = 0.7853, Line Velocity Factor = 0.81

Length of Line @ station freq	Calculated Physical Length
167.32°	253.80 feet
{(1.46/0.7853)*90°}	

-45° offset (MHz)	Resistance	Reactance	Line Characteristic Z
0.3926	0.313	-52.131	
{(45/90)*0.7853}			
			51.46
+45° offset(MHz)			
1.1780	3.641	50.675	
{(135/90)*0.7853}			

AMEND BL-20091124AJE
SECOND AMENDMENT
EL SOL BROADCASTING, LLC
WJTI AM RADIO STATION
1460 kHz - 0.24/1.0 KW DA2
WEST ALLIS, WISCONSIN
August 2010

AMENDED EXHIBIT #8 (Continued)

Line #6

Station Freq (MHz)	Resonant Freq (MHz)
1.46	0.7862

Closest 90° odd multiple to Station freq = 0.78562 Line Velocity Factor = 0.81

Length of Line @ station freq	Calculated Physical Length
167.13°	253.51 feet
{(1.46/0.7862)*90°}	

-45° offset (MHz)	Resistance	Reactance	Line Characteristic Z
0.3931	0.297	-51.47	
{(45/90)*0.7862}			
			51.00
+45° offset(MHz)			
1.1793	3.660	50.402	
{(135/90)*0.7862}			

AFFIDAVIT AND QUALIFICATIONS OF CONSULTANT

State of Georgia)
St. Simons Island) ss:
County of Glynn)

R. Stuart Graham, being duly sworn, deposes and says that he is an officer of Graham Brock, Inc. Graham Brock has been engaged by El Sol Broadcasting, LLC, to prepare the attached Technical Exhibit.

His qualifications are a matter of record before the Federal Communications Commission. He has been active in Broadcast Engineering since 1979.

The attached report was either prepared by him or under his direction and all material and exhibits attached hereto are believed to be true and correct.

This the 17th day of August 2010.

R. Stuart Graham
Affiant

Sworn to and subscribed before me
this the 17th day of August 2010

Notary Public, State of Georgia
My Commission Expires: March 18, 2011